

AMENDMENTS TO THE CLAIMS

1-2. (Cancelled)

3. (Currently Amended) A network control system for transmitting data between devices by using ~~plural-a plurality of~~ protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~said network control system each of the devices includes either or both of as said at least two devices;~~

~~a device having at least one target which receivesoperable to receive a message and performs perform processing according to the message, and at least one controller which transmitsoperable to transmit the message and establishes establish a connection for data transmission with the said target; and~~

~~a device having said network control system comprises, at least, said controller and one of said target and said controller;~~

~~said plural plurality of protocols comprise;~~

~~a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and~~

~~a second protocol for data transmission onto the on an established connection;~~

~~said controller establishesis operable to establish, before data transmission, a connection of the said second protocol to the said target;~~

~~when the said controller receives data of the data message from the said target, said controller makes is operable to make a data request by the using said first protocol;~~

~~said target transmits is operable to transmit the data onto the established connection by using said the second protocol according to the data request; and~~

~~said controller receives is operable to receive the data by using said the second protocol.~~

4. (Cancelled)

5. (Currently Amended) A network control system for transmitting data between devices by using plural-a plurality of protocols; in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

said network control system each of the devices includes either or both of as said at least two devices;

a device having at least one target which receives-operable to receive a message and performs-perform processing according to the message, and at least one controller which transmits-operable to transmit the message and establishes establish a connection for data transmission with the said target; and

a device having said network control system comprises, at least, said controller and one of said target and said controller;
said plural-plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission onto the on an established connection;

said controller establishesis operable to establish, before data transmission, a connection of the said second protocol to the said target;

the said target is operable to spontaneously transmits transmit data to the said controller through the established connection by the using said second protocol; and

said controller receives-is operable to receive the data by the using said second protocol.

6. (Currently Amended) A network control system for transmitting data between devices by using plural-a plurality of protocols; in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices comprises at least one of the following units said network control system includes as said at least two devices;~~

a device having

~~at least one controller which receives operable to receive and transmits transmit a message,~~

~~at least one target which performs operable to perform processing according to the message, and which includes at least one internal function control means for performing data transmission and a connection management means for connecting an output of said internal function control means,~~

~~a consumer which receives operable to receive data from the said target, and~~

~~an initiator which establishes operable to establish a connection for data transmission between the said target and the said consumer; and a device having said network control system comprises, at least one of,~~

~~said controller, said target, said consumer, and said initiator; said plural plurality of protocols comprise;~~

~~a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and~~

~~a second protocol for data transmission onto the an established connection; and~~

~~when said internal function control means performs said the data transmission, a said connection management means in the said target connects the output of the said internal function control means to the a connection of the said second protocol, according to a request of the said internal function control means.~~

7. (Currently Amended) A network control system for transmitting data between devices by using plural a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices comprises at least one of the following units said network control system includes as said at least two devices;~~

a device having

~~at least one controller which receivesoperable to receive and transmits_transmit a message,~~

~~at least one target which performs operable to perform processing according to the message, and which includes at least one internal function control means,~~

~~a consumer which receivesoperable to receive data from the target, and~~

~~an initiator which establishes_operable to establish a connection for data transmission between the_said target and the_said consumer; and~~

~~a device having said network control system comprises, at least one of,~~

~~said controller, said target, said consumer, and said initiator;~~

~~said plural protocols comprise;~~

~~a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and~~

~~a second protocol for data transmission onto the on an established connection; and~~

~~said target transmits_is operable to transmit data including an identifier which specifies the output source of the data, onto_on the connection, according to the_said second protocol.~~

8. (Currently Amended) A network control system for transmitting data between devices by using ~~plural~~a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices comprises at least one of the following units said network control system includes as said at least two devices;~~

a device having

at least one controller which receivesoperable to receive and
transmitstransmit a message,

a target which performsoperable to perform processing according to the message,

a consumer which receivesoperable to receive data from the said target, and

an initiator which establishesoperable to establish a connection for data transmission between the said target and the said consumer; and
a device havingsaid network control system comprises, at least one of,
said controller, said target, said consumer, and said initiator;

said pluralplurality of protocols comprise a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and a second protocol for data transmission onto
thean established connection;

said controller transmitsis operable to transmit an identifier indicating the destination in the said consumer, to the said target, by using the said first protocol; and

said target transmitsis operable to transmit the data including the identifier which indicates the destination and is received by the said first protocol, ontoon the established connection, by using the said second protocol.

9. (Currently Amended) A network control system for transmitting data between devices by using plurala plurality of protocols; in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

each of the devices comprises at least one of the following units said network control system includes as said at least two devices;

a device having

at least one controller which receivesoperable to receive and
transmitstransmit a message,

at least one target which performs operable to perform processing according to the message, and which includes at least one internal function control means,

a consumer which receives operable to receive data from the said target, and

an initiator which establishes operable to establish a connection for data transmission between the said target and the said consumer; and

a device having said network control system comprises, at least one of,

said controller, said target, said consumer, and said initiator;

said plural-plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission ~~onto~~ on an established connection;

said controller ~~transmits~~ is operable to transmit the message by the using said first protocol to a plug through which data is input and output to/from a desired internal function control means of said target; and

said target ~~executes~~ is operable to execute the process specified by the message which is directed to the plug.

10. (Currently Amended) A network control system as described in any one of Claims ~~4-3 and 5~~ to 9, wherein said the message includes a message for confirming the data transmission by the said second protocol.

11. (Currently Amended) A network control system as described in any one of claims ~~4-3 and 5~~ to 9, wherein the data transmitted by the said second protocol includes version information, and the a version of the data is managed by using the version information.

12. (Currently Amended) A network control system as described in any one of Claims ~~4-3 and 5~~ to 9, wherein the data transmitted by the said second protocol is information

about a graphical user interface which forces ~~the~~said controller to make a notification to ~~the~~a user.

13. (Currently Amended) A network control system as described in any one of Claims ~~4-3 and 5~~ to 9, wherein the data transmitted by ~~the~~said second protocol includes attribute information of the data.

14. (Currently Amended) A network control system as described in Claim 13, wherein the attribute information includes an identifier, size information, and a data section.

15. (Currently Amended) A network control system as described in any one of Claims ~~4-3 and 5~~ to 9, wherein the data transmitted by ~~the~~said second protocol is based on an object as a unit.

16. (Currently Amended) A network control system as described in Claim 15, wherein ~~said~~the object has the same structure as attribute information of the data transmitted by ~~the~~said second protocol.

17. (Currently Amended) A network control system as described in Claim 15, wherein ~~said~~the object has an identifier, size information, and a data section.

18. (Currently Amended) A network control system as described in Claim 15, wherein ~~said~~the object has attribute information in the data section.

19. (Currently Amended) A controller used in a network control system for transmitting data between devices by using ~~plural~~a plurality of protocols; in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data; are connected through a transmission line, wherein:
~~each of the devices~~said network control system includes either or both of~~;as said~~at least two devices

a device having

at least one controller which ~~transmits~~operable to transmit a message, and

at least one target which ~~receives~~operable to receive the message and ~~performs~~perform processing according to the message; and
~~said network control system comprises~~,a device having at least, one of said controller and said target;

a connection for data transmission between ~~the~~said controller and ~~the~~said target is established by ~~an initiator or the~~said controller;

~~said plural~~plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission ~~onto the~~on an established connection; and

~~said controller supports the plural~~is operable to support said plurality of protocols, ~~transmits to transmit~~ the message by ~~the~~using said first protocol, and ~~receives to receive~~ the data from the connection by ~~the~~using said second protocol.

20. (Currently Amended) A controller used in a network control system for transmitting data between devices by using ~~plural~~a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices~~said network control system includes either or both of;as said at least two devices

a device having at least one controller which ~~transmits~~operable to transmit a message, and at least one target which receives~~operable to receive~~ the message and ~~performs~~perform processing according to the message;
~~said network control system comprises~~,a device having at least, one of said controller and said target;

a connection for data transmission between the said controller and the said target is established by an initiator or the said controller;

said plural-plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission onto the-on an established connection; and

said controller supports the plural-is operable to support said plurality of protocols, makes-to make a data request by the-using said first protocol, and receives-to receive the data transmitted according to the data request, from the connection, by the using said second protocol.

21. (Currently Amended) A controller used in a network control system for transmitting data between devices by using plural-a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

each of the devices-said network control system includes either or both of;as said at least two devices

a device having at least one controller which-transmits-operable to transmit a message, and at least one target which receives-operable to receive the message and performs-perform processing according to the message;

said network control system comprises;a device having at least,- one of said controller and said target;

a connection for data transmission between the said controller and the said target is established by an initiator or the said controller;

said plural-plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission ~~onto the~~on the established connection; and

said controller ~~supports the plural~~said plurality of protocols, establishes ~~to establish~~ the connection to ~~the said~~ target in advance, ~~makes to make~~ a data request by ~~the first~~using said first protocol when receiving data, and ~~receives to receive~~ the data transmitted according to the data request, from the connection, by ~~the~~using said second protocol.

22. (Currently Amended) A controller used in a network control system for transmitting data between devices by using ~~plural~~a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devieses~~said network control system includes ~~either or both of~~as said at least two devices

~~a device having~~ at least one controller ~~which transmits~~operable to transmit a message, and at least one target ~~which receives~~operable to receive the message and ~~performs~~perform processing according to the message; and
~~said network control system comprises~~a device having at least, ~~one of~~said controller and said target;

a connection for data transmission between ~~the~~said controller and the target is established by ~~an initiator or the~~said controller;

~~said plural~~plurality of protocols comprise;

a first protocol which comprises ~~a~~ message transmission for transmitting the message and ~~a~~ message response which is a response to the message transmission, and

a second protocol for data transmission ~~onto the~~on the established connection; and

said controller ~~supports the plural~~is operable to support ~~said plurality~~ of protocols, and ~~receives to receive~~ the data which is transmitted ~~onto on~~ the connection spontaneously by ~~the~~said target according to ~~the~~said second protocol.

23. (Currently Amended) A controller used in a network control system for transmitting data between devices by using plural a plurality of protocols; in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices includes either or both of;~~ said network control system includes as said at least two devices

a device having at least one controller which transmits operable to transmit a message, and at least one target which receives operable to receive the message and performs perform processing according to the message;

said network control system comprises, a device having at least, one of said controller and said target;

a connection for data transmission between the said controller and the said target is established by an initiator or the said controller;

said plural plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission onto the on the established connection; and

said controller supports the plural is operable to support said plurality of protocols, establishes to establish the connection of the said second protocol to the said target in advance of data transmission, and receives to receive the data which is transmitted onto the connection spontaneously by the said target according to the said second protocol.

24. (Currently Amended) A controller used in a network control system for transmitting data between devices by using plural a plurality of protocols; in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices comprises at least one of the following units;~~ said network control system includes as said at least two devices

a device having

at least one controller ~~which receives~~operable to receive and
~~transmits~~transmit a message,

a target ~~which performs~~operable to perform processing according
to the message,

a consumer ~~which receives~~operable to receive data from ~~the said~~
target, and

an initiator ~~which establishes~~operable to establish a connection for
data transmission between ~~the said~~ target and ~~the said~~ consumer; and

a device having at least one of said controller, said target, said consumer
and said initiator;

said plural plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting
the message and a message response which is a response to the message
transmission, and

a second protocol for data transmission ~~onto the~~on the established
connection;

~~said network control system comprises, at least, said target which transmits~~is
operable to transmit data including an identifier indicating the destination and received by
~~the said~~ first protocol, onto the connection, according to ~~the said~~ second protocol, ~~said~~
~~controller, said consumer, and said initiator;~~ and

~~said controller transmits~~is operable to transmit the identifier indicating the
destination in ~~the said~~ consumer, to ~~the said~~ target, by using ~~the said~~ first protocol.

25. (Currently Amended) A controller used in a network control system for
transmitting data between devices by using plural-a plurality of protocols, in a network in
which at least two devices for handling at least one kind of data among video data, audio
data, and information data, are connected through a transmission line, wherein:

~~each of the devices comprises at least one of the following units; said network
control system includes as said at least two devices~~

a device having

at least one controller which receivesoperable to receive and transmits transmit a message,

at least one target which performsoperable to perform processing according to the message, and which includes at least one internal function control means,

a consumer which receivesoperable to receive data from the said target, and

an initiator which establishesoperable to establish a connection for data transmission between the said target and the said consumer; and

a device having at least one of said controller, said target, said consumer and said initiator;

said plural plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission onto the on the established connection;

said network control system comprises, at least, said target which executesis operable to execute a the process specified by the message which is directed to a plug through which data is input and output to/from a desired internal function control means of said target, said controller, said consumer, and said initiator; and

said controller transmits-is operable to transmit the message to the plug by using the said first protocol.

26. (Currently Amended) A target used in a network control system for transmitting data between devices by using plural a plurality of protocols; in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

each of the devices includes either or both of; said network control system includes as said at least two devices

a device having

at least one controller which transmitsoperable to transmit a message, and

at least one target which receivesoperable to receive the message and performsperform processing according to the message;

said network control system comprises,a device having at least, one of said controller and said target;

a connection for data transmission between thesaid controller and thesaid target is established by an initiator or thesaid controller;

said plural-plurality of protocols comprise;

a first protocol which comprises amessage transmission for transmitting the message and amessage response which is a response to the message transmission, and

a second protocol for data transmission onto theon theestablished connection; and

said target supports thepluralis operable to support said plurality of protocols, and transmitsto transmit the data onto the connection by theusingsaid second protocol according to the message received by thesaid first protocol.

27. (Currently Amended) A target used in a network control system for transmitting data between devices by using pluralaplurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

each of the devices includes either or both of, said network control system includes as said at least two devices

a device having

at least one controller which transmitsoperable to transmit a message, and

at least one target which receivesoperable to receive the message and performsto perform processing according to the message; and a device having said network control system comprises, at least, one of

said controller and said target;

a connection for data transmission between the controller and the target is established by ~~an initiator or the said~~ controller;

~~said plural plurality of protocols comprise;~~

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission ~~onto the~~on the established connection; and

~~said target supports the plural is operable to support said plurality of protocols, and transmits to transmit~~ the data onto the connection by ~~the~~using said second protocol, according to a data request from ~~the~~said controller by ~~the~~using said first protocol.

28. (Currently Amended) A target used in a network control system for transmitting data between devices by using ~~plural~~a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein;
- ~~each of the devices includes either or both of, said network control system~~
includes as said at least two devices
- a device having
- ~~at least one controller which transmits~~operable to transmit a message, and
- ~~at least one target which receives~~operable to receive the message and ~~performs~~perform processing according to the message;
- ~~said network control system comprises, a device having at least, one of~~
said controller and said target;
- a connection for data transmission between ~~the~~said controller and ~~the~~said target is established by ~~an initiator or the said~~ controller;
- ~~said plural plurality of protocols comprise;~~
- a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission ~~onto the~~on the established connection; and

said target has ~~the~~plural said plurality of protocols, and is operable to spontaneously ~~transmits~~transmit the data onto the connection by ~~the~~using said second protocol.

29. (Currently Amended) A target used in a network control system for transmitting data between devices by using ~~plural~~a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices comprises at least one of the following units; said network control system includes as said at least two devices~~

a device having

~~at least one controller which receives~~operable to receive and ~~transmits~~transmit a message,

~~at least one target which performs~~operable to perform processing according to the message, and which includes at least one internal function control means for performing data transmission and connection management means for connecting an output of said internal function control means,

~~a consumer which receives~~operable to receive data from ~~the~~said target, and

~~an initiator which establishes~~operable to establish a connection for data transmission between ~~the~~said target and ~~the~~said consumer;

a device having ~~said network control system~~ comprises, at least, one of said controller, said target, said consumer, and said initiator;

~~said~~ plural plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission ~~onto the~~on the established connection; and

in said target, when ~~the~~said internal function control means performs the data transmission, ~~a~~said connection management means in ~~the~~said target connects the output of ~~the~~said internal function control means to ~~the~~a connection of ~~the~~said second protocol, according to a request from ~~the~~said internal function control means.

30. (Currently Amended) A target used in a network control system for transmitting data between devices by using ~~plural~~a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices comprises at least one of the following units; said network control system includes as said at least two devices~~

a device having

~~at least one controller which receives operable to receive and transmits transmit~~ a message,

~~at least one target which performs operable to perform processing according to the message, and which includes at least one internal function control means,~~

~~a consumer which receives operable to receive data from the said target, and~~

~~an initiator which establishes operable to establish a connection for data transmission between the said target and the said consumer;~~

a device having said network control system comprises, at least, one of said controller, said target, said consumer, and said initiator; said ~~plural~~plurality of protocols comprise;

~~a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and~~

~~a second protocol for data transmission onto the~~on the established connection; and

said target ~~transmits~~is operable to transmit data including an identifier which specifies ~~the~~an output source of the data, onto the connection, by ~~the~~using ~~said~~ second protocol.

31. (Currently Amended) A target used in a network control system for transmitting data between devices by using ~~plural~~a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices comprises at least one of the following units; said network control system includes as said at least two devices~~

a device having

 at least one controller ~~which receives~~operable to receive and ~~transmits~~transmit a message,

 a target ~~which performs~~operable to perform processing according to the message,

 a consumer ~~which receives~~operable to receive data from ~~the~~said target, and

 an initiator ~~which establishes~~operable to establish a connection for data transmission between ~~the~~said target and ~~the~~said consumer; ~~and~~

a device having at least one of said controller, said target, said consumer and said initiator;

 said ~~plural~~plurality of protocols comprise;

 a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

 a second protocol for data transmission ~~onto the~~on the established connection;

said network control system comprises, at least, said controller which transmitsis operable to transmit, to said target, an identifier indicating the~~a~~ destination in ~~the~~said consumer by using said the first protocol ~~to the target, said target, said consumer, and said initiator; and~~

said target ~~transmits~~is operable to transmit the data which includes the identifier indicating the destination and which is received by the said first protocol, onto the connection, by using said the second protocol.

32. (Currently Amended) A target used in a network control system for transmitting data between devices by using ~~plural~~a plurality of protocols, in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

~~each of the devices comprises at least one of the following units; said network control system includes as said at least two devices~~

a device having

~~at least one controller which receives~~operable to receive and ~~transmits~~transmit a message,

~~at least one target which performs~~operable to perform processing according to the message, and which includes at least one internal function control means,

~~a consumer which receives~~operable to receive data from the said target, and

~~an initiator which establishes~~operable to establish a connection for data transmission between the said target and the said consumer; and
a device having at least one of said controller, said target, said consumer and said initiator;

said pluralplurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission ~~onto the~~on the established connection;

~~said network control system comprises~~, at least, said controller which transmitsis operable to transmit the message by the using said first protocol to a plug through which

data is input and output to/from a desired internal function control means of said target, said target, said consumer, and said initiator; and

said target executes-is operable to execute the process specified by the message which is directed to the plug.

33. (Currently Amended) A consumer used in a network control system for transmitting data between devices by using plural-a plurality of protocols; in a network in which at least two devices for handling at least one kind of data among video data, audio data, and information data, are connected through a transmission line, wherein:

each of the devices comprises at least one of the following units; said network control system includes as said at least two devices

a device having

said consumer,

at least one controller which receivesoperable to receive and transmits-transmit a message,

a target which performs-operable to perform processing according to the message, and

an initiator which establishes-operable to establish a connection for data transmission between the said target and the said consumer;

a device having at least one of said network control system comprises, at least, said controller, said target, said consumer, and said initiator; said plural-plurality of protocols comprise;

a first protocol which comprises a message transmission for transmitting the message and a message response which is a response to the message transmission, and

a second protocol for data transmission onto theon the established connection; and

said consumer receives-is operable to receive data including an identifier indicating the destination in the consumer, which data is transmitted by the said target onto-on the connection by using the second protocol and which is received from the said controller by the using said first protocol.